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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,661	11/18/2003	Patrick Duvaut	060707-1670	2528
24504	7590	03/02/2007	EXAMINER	
THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP			BOLOURCHI, NADER	
100 GALLERIA PARKWAY, NW			ART UNIT	PAPER NUMBER
STE 1750			2611	
ATLANTA, GA 30339-5948				
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	03/02/2007	PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/714,661	DUVAUT ET AL.
	Examiner Nader Bolourchi	Art Unit 2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 18 November 2003.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-9 is/are rejected.
- 7) Claim(s) 10-15 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 18 November 2003 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                                    |                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                               | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/23/2004</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
|                                                                                                                                    | 6) <input type="checkbox"/> Other: _____.                         |

## DETAILED ACTION

### *Priority*

1. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged.

### *Information Disclosure Statement*

2. The information disclosure statement (IDS) submitted on 8/23/2004 have been considered and made of record by the examiner.

### *Drawings*

3. The drawings are objected to under 37 CFR 1.83(a) because they fail to show Step 1, Step 2, and step 3 smart DSL concept for LDSL as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency.

Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the method for implementing DSL for LDSL, as claimed in claims 1-9 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application

must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

5. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

6. The disclosure is objected to because of the following informalities:

The specification includes numerous abbreviations with improper format. This includes, but not limited to, SHDSL, AMI, SBC, and FDD of par. 6, 11, and 16. It is suggested to use the long phrase equivalent, following with the abbreviation in the parentheses, for first incident of each abbreviation.

***Claim Objections***

7. Claims 1 and 3 are objected to because of the following informalities: It is suggested to replace "DSL", "LDSL" in claim 1 and FDD in claim 3, with the long phrase equivalent, following with the abbreviation in the parentheses.

Appropriate correction is required.

**Claim Rejections - 35 USC § 112, second paragraph**

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 1 rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: "generating the optimized candidate system; selecting the optimized candidate system to implement in an LDSL system".

Claim 2-19 is rejected due to its dependency to rejected claim 1.

**Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Darveau (US 6,760,383).

Regarding claim 1, Darveau discloses a method for implementing smart DSL (both Asynchronous and synchronous DSL recited as ADSL and SDSL in col.2: line 32-35) for LDSL systems (last 3 lines of Abstract), the method comprising: defining a candidate system to be implemented by an LDSL system (Fig. 5); optimizing criteria associated with the candidate system (improved transmission distance shown in Fig. 4; col. 4: last paragraph); and selecting a candidate system to implement in an LDSL system (Figs. 7-9; col. 7: line 28 to col. 8: line 49)

Regarding claim 2, Darveau discloses as stated in rejection of claim 1 above. Furthermore, Darveau discloses that defining a candidate system further comprises: determining features of upstream transmission (DUT-R to DUT-C in Figs. 7-9).

Regarding claim 3, Darveau discloses as stated in rejection of claim 1 above. Furthermore, Darveau discloses that determining features of upstream transmission further comprises: determining one or more of: cut-off frequencies, side lobe shapes, overlap, partial overlap or FDD characteristics (FDD in Fig. 4.; DUT-R to DUT-C along with DUT-C to DUT-R in Figs. 7-9).

Regarding claim 4, Darveau discloses as stated in rejection of claim 1 above. Furthermore, Darveau discloses that defining a candidate system further comprises: determining features of downstream transmission (DUT-C to DUT-R in Figs. 7-9).

Regarding claim 5, Darveau discloses as stated in rejection of claim 1 above.

Furthermore, Darveau discloses that determining features of downstream transmission further comprises: determining one or more of: cut-off frequencies, side lobe shapes, overlap, partial overlap or FDD characteristics (FDD in Fig. 4.; DUT-R to DUT-C along with DUT-C to DUT-R in Figs. 7-9).

Regarding claim 6, Darveau discloses as stated in rejection of claim 1 above.

Furthermore, Darveau discloses that optimizing criteria associated with the candidate system further comprises: optimizing criteria associated with the candidate system to fulfill upstream and downstream performance targets.

(data rate in Figs. 7-9)

Regarding claim 7, Darveau discloses as stated in rejection of claim 1 above.

Furthermore, Darveau discloses that selecting a candidate system to implement in an LDSL system further comprises: selecting a spectral mask for use with upstream or downstream transmission (Fig. 4; col. 6: lines 28-44).

Regarding claim 8, Darveau discloses as stated in rejection of claim 1 above.

Furthermore, Darveau discloses that selecting a candidate system to implement in an LDSL system further comprises: selecting a candidate system during modem

handshake procedures (connection of DTU-C and DTU-R shown in Fig. 5, which result in masks shown in Figs. 7-9) .

Regarding claim 9, Darveau discloses as stated in rejection of claim 1 above.

Furthermore, Darveau discloses that defining a number of upstream masks (DTU-R to DTU-c in Figs. 7-9) and a number of downstream masks (DTU-c to DTU-R in Figs. 7-9).

#### ***Double Patenting***

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

10. Claims 1-8 is provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-8 of copending Application No. 10/714655. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims

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are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claim 9 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 9 of U.S. application 10/714655. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 9 of patent application 10/714655 contain(s) every element of claim 9 of the instant application except claim 9 does not explicitly states upstream and downstream. It would have been obvious to one having ordinary skill in the art at the time the invention was made to define masks for both upstream and downstream since it was known in the art that both upstream and downstream performance are related and are objectives for LDSL

***Allowable Subject Matter***

12. Claims 10-15 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.
  
13. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

***Remarks***

14. No claim is allowed.

***Conclusion***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Barrass (US 2006/0163949).

***Contact Information***

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nader Bolourchi whose telephone number is (571) 272-8064. The examiner can normally be reached on M-F 8:30 to 4:30.

17. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David. C. Payne can be reached on (571) 272-3024. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

18. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

Nader Bolourchi  
2/20/2007  
Art Unit 2611

*Jean B. Corrielus*  
JEAN B. CORRIELUS  
PRIMARY EXAMINER

2-27-07